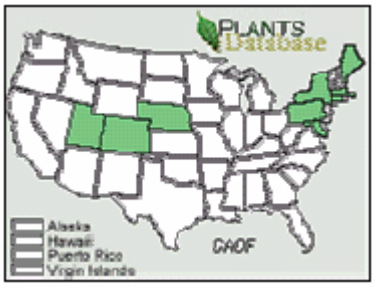
Goat's-rue *Galega officinalis L.*

Native Origin: Europe and eastern Asia; introduced to the western United States in the late 1800s as a possible forage crop.

Description: Goats-rue is an herbaceous perennial in the legume family (Fabaceae). Each plant tends to form a crown and ranges 2-6 feet tall. A plant may have 20 stems and a deep taproot. The first seedling leaves are large, oval, and dark green. Mature leaves are alternate, odd-pinnate with six to ten pairs of leaflets. Each leaflet has a small hair-like projection on its tip. The stems are hollow cylindrical, and tubular. The stipule (leaf-like appendage at the base of the leaf stem) is sagittate (arrow shaped) and toothed and lobed. The white and bluish to purplish pea-like blossoms are borne in terminal or axially racemes. Flowering begins in June and continues until frost in the fall. Each blossom produces a straight, narrow, smooth pod, which points outward and is angled slightly upward from the stem. There are 1- 9 seeds per pod and there may be upwards of 15,000 pods per plant. Goats-rue seeds are bean-shaped, dull yellow in color, and about 2 ½ times larger that alfalfa seeds. Seeds drop to the ground when mature and may be spread by water, equipment, or animal manures. Goats-rue seed typically remain dormant until scarified and may remain viable for ten years.

Habitat: It grows in Goat's-rue thrives in marshy fields, meadows, woodlands, sunny forest edges, semi-shaded fields and along roadsides and stream banks. The plant prefers light (sandy), medium (loamy) and heavy (clay) soils and can grow in nutritionally poor soil. The plant prefers moist soils that are acid, neutral or basic (alkaline). It prefers full sun, but will tolerate light shade.



Distribution: This species is reported from states shaded on Plants Database map. It is reported invasive in PA.

Ecological Impacts: It forms dense crowns capable of regenerating for several seasons. The plants have naturalized and spread along waterways. Goats-rue is toxic to ruminants. The alkaloid content is highest in the spring.

Control and Management:

- **Manual**- Mowing, clipping, cutting, and shallow cultivation are poor means of control because the plant will flower and produce seed even when very small. Alternate cropping and row crops are effective deterrents since the cultivation interrupts the life cycle of goats-rue.

- **Chemical**- It can be effectively controlled using any of several readily available general use herbicides such as glyphosate. Follow label and state requirements. Crowns of treated plants may remain viable up to seven years unless retreated or excavated and removed.

References: www.forestimages.org, http://plants.usda.gov, www.nps.gov/plants/alien, www.invasive.org/eastern/other/vol24_10.pdf, www.invasive.org/browse/subject.cfm?sub=4535